

PROPOSED MASSACHUSETTS TAX EXPENDITURES EVALUATION SUMMARY

EVALUATION YEAR: 2021

TAX EXPENDITURE TITLE	Exemption for Aircraft & Aircraft Parts
TAX EXPENDITURE NUMBER	3.112
TAX EXPENDITURE CATEGORY	Exempt Products/Services
TAX TYPE	Sales and Use tax
LEGAL REFERENCE	M.G.L. c. 64H, § 6(uu) and (vv); M.G.L. c. 64I, § 7(d) and (e)
YEAR ENACTED	2002
REPEAL/EXPIRATION DATE	None
ANNUAL REVENUE IMPACT	Tax loss of \$23.8 - \$25.9 million per year during FY19-FY23
NUMBER OF TAXPAYERS	Buyers and Sellers of Aircraft & Aircraft Parts
AVERAGE TAXPAYER BENEFIT	Not Available

Description of the Tax Expenditure: Airplanes, helicopters, gliders and other aircraft are exempt from sales tax. Parts used exclusively for the repair of aircraft are also exempt.	Is the purpose defined in the statute? The statute does not explicitly state the purpose of this tax expenditure.
What are the policy goals of the expenditure? DOR assumes that the expenditure is intended to further interstate and foreign commerce, and to encourage the use of Massachusetts airports.	Are there other states with a similar Tax Expenditure? All the New England states, except Vermont, have an exemption for the sale of aircraft and parts. New York also has a similar exemption. New Hampshire does not have a sales tax.

INTRODUCTION

The tax expenditure exempts from sales tax transfers of airplanes, helicopters, gliders and other aircraft. Parts used exclusively for the repair of aircraft are also exempt.

The Massachusetts sales tax (and complementary use tax) is a transaction tax that applies to retail sales of tangible personal property (including prewritten computer software regardless of mode of transfer) and enumerated services (currently including only telecommunication services). A retail sale is any sale other than a sale for resale. A sale for resale occurs when a business purchases an item and sells it to a third party in substantially the same form in which it was purchased. All retail sales are taxable unless an exemption applies. These exemptions are tax expenditures because they prevent the imposition of tax on transactions that would otherwise be taxable.

While the sales tax is imposed on retail sales, it is not necessarily a tax on final consumption by households, as is the case with the value added taxes (VATs) imposed in most other countries. A retail sale to a business may also be subject to sales tax. For example, paper, desks, computers, and similar items purchased for office use would generally be taxable. The exclusion of sales for resale and the application of certain exemptions prevent the imposition of the tax on many business inputs, but other business inputs remain taxable. Aside from specific statutory exclusions and exemptions, there is no general prohibition in the sales and use tax statutes on the application of the tax to retail sales at multiple stages of the production and sales process.

Absent the exemption afforded by this tax expenditure, sales of aircraft and aircraft parts would be subject to sales and use tax. It is possible that the sale for resale exclusion might apply to such sales if the purchaser buys the aircraft or parts to sell to its customers. However, in the absence of the exemption, the sales and use tax would apply to sales of aircraft and aircraft parts. This would be so even if the purchasers use the aircraft and parts in their business operations.

Note that commercial aircraft are subject to local property tax in any city or town in which they are present during the year.¹ The local property tax on commercial aircraft is apportioned based on the number of days the aircraft is present in the city or town.

Non-commercial aircraft are subject to an annual registration fee. Such aircraft are exempt from local property tax if the owner registers and pays the fee.²

¹ G.L. c. 59, §18.

² See G.L. c. 90, § 49(b).

POLICY GOALS

DOR assumes that the expenditure is intended to further interstate and foreign commerce and to encourage the use of Massachusetts airports.

DIRECT COSTS

The revenue loss resulting from this tax expenditure is estimated to be \$23.8 - \$25.9 million per year during FY19-FY23. See Table 1.

**Table 1. Tax Revenue Loss Estimates for Sales Tax Exemption
for Aircraft & Aircraft Parts**

Fiscal Year	2019	2020	2021	2022	2023
Estimated Revenue Loss (\$Million)	\$24.2	\$23.8	\$24.5	\$25.2	\$25.9

DIRECT BENEFITS

The Massachusetts consumers and businesses that manufacture, buy, and sell aircraft and aircraft parts are the direct beneficiaries of the sales tax exemption. Buyers benefit from the sales tax exemption in the form of paying a lower “after tax” price while sellers benefit in the form of receiving a higher “before tax” price. The exact split of the direct benefits depends on the interaction of demand and supply and is often difficult to quantify.

Businesses producing/selling aircraft & aircraft parts include businesses in the industry of (1) aircraft manufacturing; (2) aircraft engine and engine parts manufacturing; (3) other aircraft parts and auxiliary equipment manufacturing; (4) search, detection, navigation, guidance, aeronautical, and nautical system, and instrument manufacturing; and (5) aircraft and aeronautical equipment and supplies merchant wholesalers. Table 2 reports the numbers of such businesses in Massachusetts and their annual payroll, sales, and employment in 2017. However, due to confidentiality, some information has been omitted from Table 2 to avoid disclosing data for individual companies.

Out-of-state businesses selling aircraft and aircraft parts to Massachusetts residents and businesses are also direct beneficiaries.

Table 2. Annual Payroll, Sales, and Employment of Businesses Producing/Selling Aircraft and Aircraft Parts in Massachusetts

2017 NAICS Code	Meaning of NAICS Code	Number of Firms	Number of Establishments	Sales, Value of Shipments, or Revenue (\$Millions)	Annual Payroll (\$Millions)	Number of Employees
336411	Aircraft manufacturing	D	D	D	D	20 to 99 employees
336412	Aircraft engine and engine parts manufacturing	14	15	\$807.0	\$305.9	3,177
336413	Other aircraft parts and auxiliary equipment manufacturing	D	D	D	\$24.2	319
334511	Search, detection, navigation, guidance, aeronautical, and nautical system, and instrument manufacturing	28	30	\$2,472.4	\$640.9	7,419
4238601	Aircraft and aeronautical equipment and supplies merchant wholesalers	D	D	D	D	0 to 19 employees

Source: The U.S. Census Bureau, 2017 Economic Census.

D: Withheld to avoid disclosing data for individual companies; data are included in higher level totals

According to the Aeronautics Division at the Massachusetts Department of Transportation (MassDOT), there are 1,797 aircrafts registered in Massachusetts in 2021.³ Although actual purchase dates of the registered aircraft are not known, we can loosely say all the owners of these aircraft are also direct beneficiaries of the sales tax exemption as both buyers of aircraft and potential buyers of aircraft parts.

EVALUATION: COMPARING COSTS AND BENEFITS

In the previous sections, we report the direct costs (to the Commonwealth, or to the residents and businesses who ultimately bear the costs when the Commonwealth cuts government spending or increases taxes to finance the sales tax exemption for aircraft and

³ The number of registered aircrafts varies by year. It was 1,980 in 2018, 2,107 in 2019 and 2,046 in 2020.

aircraft parts) and direct benefits (to buyers and sellers of aircraft and aircraft parts) of this tax expenditure. In this instance, the direct costs to the Commonwealth, namely the sales or use tax that would have been collected from these transactions, are equal to the direct benefits afforded by the tax expenditure to buyers and sellers of aircraft and aircraft parts, which is the sales or use tax they would have had to pay to the Commonwealth.

Besides the direct costs and benefits, there are indirect and induced costs and benefits associated with this tax expenditure. The indirect impact (cost or benefit) is felt by the chain of businesses that provide intermediate products and services to the directly impacted businesses. The induced impact (cost or benefit) occurs when a directly or indirectly impacted business passes on the costs or benefits to households, such as those of its employees, in the form lower or higher income, such as wages and salaries, who then in turn reduce or increase purchases of goods and services from other businesses. The total costs or benefits to the whole economy are larger than the initial direct impacts. This phenomenon is called the “Multiplier Effect”.⁴

To measure these indirect and induced costs and benefits, economists often need to utilize complicated models, such as REMI (Regional Economic Models, Inc.) or IMPLAN (Impact Analysis for Planning) models. DOR did not attempt to use such models given their complexity and the data limitations present in this instance.

DOR assumes that the expenditure is intended to further interstate and foreign commerce and to encourage the use of Massachusetts airports. Although we are not aware of any studies measuring how much sales tax exemption for aircrafts and aircraft parts help achieve these goals, there are many studies on the economic impact of airports and aviation industry themselves. For example, the 2019 Massachusetts Statewide Airport Economic Impact Study prepared by the MassDOT Aeronautics Division⁵ details how Massachusetts’ 39 public-use airports are economically valuable to the Commonwealth by quantifying employment, payroll, and economic output.⁶ The study reports that Massachusetts airports generated \$24.7 billion in output, \$7.2 billion in total payroll, and created 199,237 jobs in 2017. Another study prepared by PricewaterhouseCoopers LLP⁷

⁴ For an illustration of “Multiplier Effect”, see Slide 4 of:

<https://www.ilw.com/seminars/JohnNeillCitation.pdf>

⁵ Massachusetts Statewide Airport Economic Impact Study Update Executive Summary, January 2019

<https://www.mass.gov/economic-impact-study>

⁶ The study considers the annual impacts associated with on-airport, aviation-related businesses and government organizations, capital improvement projects, military aviation, the spending of visitors who arrive via scheduled commercial service airlines, and the spending of visitors who arrive on privately-owned general aviation aircraft.

⁷ <https://nbaa.org/wp-content/uploads/advocacy/legislative-and-regulatory-issues/business-aviation-essential/General-Aviation-Contribution-to-the-US-Economy-20200219.pdf>

estimates that general aviation (other than aircraft used for scheduled commercial air service or operated by the military) in Massachusetts generated \$3.6 billion in output, \$1.4 billion in labor income, and \$2.1 billion in GDP, and created 19,300 jobs in 2018.

Similar Tax Expenditures Offered by Other States

All the New England states with a sales tax, except Vermont, have an exemption for the sale of aircraft and parts. New York also has a similar exemption.

Sales and use taxation of aircraft generally varies across the states. About half of all states have a “fly away exemption” where no sales tax is charged if the plane is removed from the state within a certain timeframe (anywhere from 10-60 days). 9 of these states also have either a full or partial exemption for parts.

27 states have an exemption for aircraft & parts used in commercial operations or interstate commerce.

5 states have no exemption for aircraft but do have either a limited or full exemption for parts.